#### HEAVY MACHINERY OUTLOOK

TAX CUTS CRUCIAL TO SUSTAINING U.S. INDUSTRIAL GROWTH IN 2018 AND BEYOND

FEDERAL RESERVE BANK OF CHICAGO 31st SYMPOSIUM

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### INDUSTRIAL OUTLOOK; WHAT A DIFFERENCE A YEAR CAN MAKE—SPEECH TITLES 2016

01/2016	US AN OASIS IN A MODEST GROWTH WORLD	AED	
04/2016	MODEST GLOBAL GROWTH CONTINUES		AED
08/2016	ECONOMIC OUTLOOK MORE OF THE SAME	NFPA	
10/2016	WILL ANYONE IN THE CONSTRUCTION AND		
	MINING SECTOR EVER SMILE AGAIN		AMT
11/2016	TRUMP DIVIDENDS: THE CONSTRUCTION AND		
	MINING SECTOR WILL SMILE AGAIN	AEM	

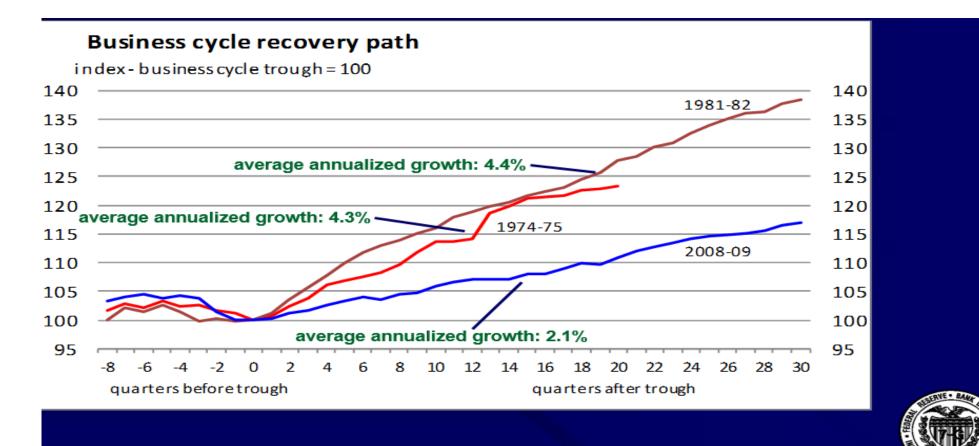
#### INDUSTRIAL OUTLOOK: WHAT A DIFFERENCE A YEAR CAN MAKE—POST ELECTION--MAYBE

01/2017	TRUMP ELECTION CHANGES THE STATUS	
	QUO FOR INDUSTRIAL COMPANIES	AED
03/2017	EXECUTION KEY TO STATUS QUO CHANGE	
	FOR THE INDUSTRIAL SECTOR	AEM
05/2017	STILL WAITING FOR EXECUTION TO CHANGE	
	THE INDUSTRIAL SECTOR STATUS QUO	AEM
08/2017	ARE WE WAITING FOR GODOT? OR SHOULD	

**NFPA** 

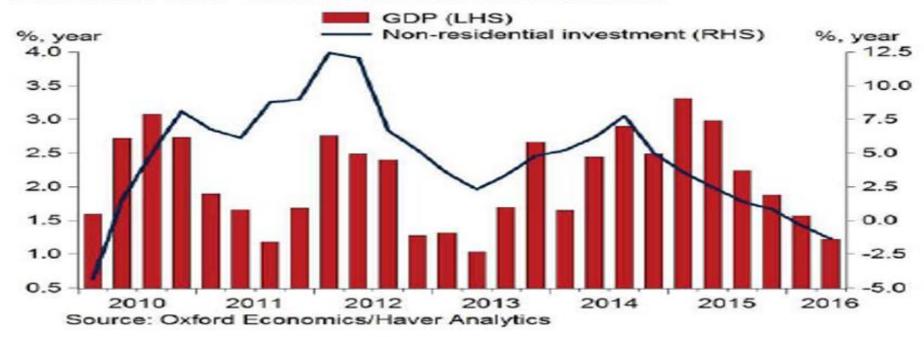
WE LOWER EXPECTATIONS

#### PATH OF THE CURRENT RECOVERY RESTRAINED COMPARED WITH PAST RECESSIONS



#### GDP GROWTH DOES DRIVE BUSINESS INVESTMENT

#### US: Real GDP and business investment



#### THE FED STILL EXPECTS TREND GDP GROWTH OVER THE NEXT 3 YEARS-FOMC FORECAST 9/17

Economic projections of Federal Reserve Board members and Federal Reserve Bank presidents under their individual assessments of projected appropriate monetary policy, September 2017

Advance release of table 1 of the Summary of Economic Projections to be released with the FOMC minutes

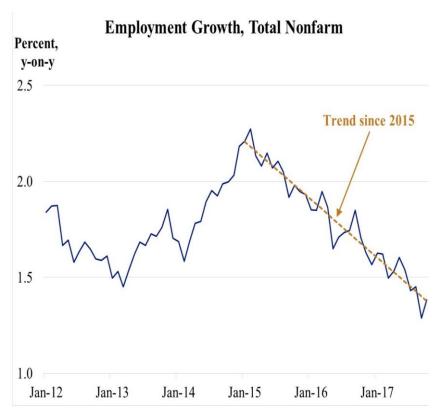
#### Percent

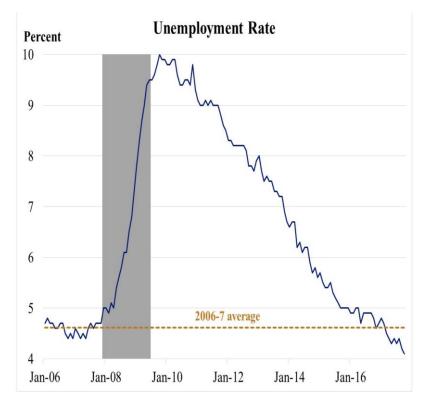
	$\mathrm{Median}^1$		Central tendency <sup>2</sup>				Range <sup>3</sup>								
Variable	2017	2018	2019	2020	Longer	2017	2018	2019	2020	Longer	2017	2018	2019	2020	Longer
					run					run					run
Change in real GDP	2.4	2.1	2.0	1.8	1.8	2.2 - 2.5	2.0 - 2.3	1.7 - 2.1	1.6 - 2.0	1.8 - 2.0	2.2 - 2.7	1.7 - 2.6	1.4 - 2.3	1.4 - 2.0	1.5 - 2.2
June projection	2.2	2.1	1.9	n.a.	1.8	2.1 - 2.2	1.8 - 2.2	1.8 - 2.0	n.a.	1.8 - 2.0	2.0 - 2.5	1.7 - 2.3	1.4 - 2.3	n.a.	1.5 - 2.2
Unemployment rate	4.3	4.1	4.1	4.2	4.6	4.2 - 4.3	4.0 - 4.2	3.9 - 4.4	4.0 - 4.5	4.5 - 4.8	4.2 - 4.5	3.9 - 4.5	3.8 - 4.5	3.8 - 4.8	4.4 - 5.0
June projection	4.3	4.2	4.2	n.a.	4.6	4.2 - 4.3	4.0 - 4.3	4.1 - 4.4	n.a.	4.5 - 4.8	4.1 - 4.5	3.9 - 4.5	3.8 - 4.5	n.a.	4.5 - 5.0
PCE inflation	1.6	1.9	2.0	2.0	2.0	1.5 - 1.6	1.8 - 2.0	2.0	2.0 - 2.1	2.0	1.5 - 1.7	1.7 - 2.0	1.8 - 2.2	1.9 - 2.2	2.0
June projection	1.6	2.0	2.0	n.a.	2.0	1.6 - 1.7	1.8 - 2.0	2.0 - 2.1	n.a.	2.0	1.5 - 1.8	1.7 - 2.1	1.8 - 2.2	n.a.	2.0
Core PCE inflation <sup>4</sup>	1.5	1.9	2.0	2.0		1.5 - 1.6	1.8 - 2.0	2.0	2.0 - 2.1	! ! !	1.4 - 1.7	1.7 - 2.0	1.8 - 2.2	1.9 - 2.2	! ! !
June projection	1.7	2.0	2.0	n.a.		1.6 - 1.7	1.8 - 2.0	2.0 - 2.1	n.a.		1.6 - 1.8	1.7 - 2.1	1.8 - 2.2	n.a.	
Memo: Projected appropriate policy path										1 1 1 1 1					
Federal funds rate	1.4	2.1	2.7	2.9	2.8	1.1-1.4	1.9 - 2.4	2.4 - 3.1	2.5 - 3.5	2.5 - 3.0	1.1 – 1.6	1.1 - 2.6	1.1 - 3.4	1.1 - 3.9	2.3 - 3.5
June projection	1.4	2.1	2.9	n.a.	3.0	1.1 - 1.6	1.9 - 2.6	2.6 - 3.1	n.a.	2.8 - 3.0	1.1 - 1.6	1.1 - 3.1	1.1 - 4.1	n.a.	2.5 - 3.5

#### FASTER ECONOMIC GROWTH NEEDS INVESTMENT

- U.S. GROWTH OVER MEDIUM AND LONGER-TERM DRIVEN BY LABOR FORCE AND PRODUCTIVITY TRENDS
- Trend growth of the economy of 1.8% to 2% stems from
  - -Labor force growth rate has been near 0.8%;
  - -Will be less over next decade making immigration crucial
  - -Unemployment rate likely to be low for several years
- Longer-term productivity growth is about 1% to 1.25%; but has been 2% to 2.5% from 1995 to 2005
- Productivity growth CONTINUES well below trend due to weak investment- 5 year moving average 0.4%

### ECONOMIC GROWTH FROM LABOR HAS NEARLY RUN ITS COURSE

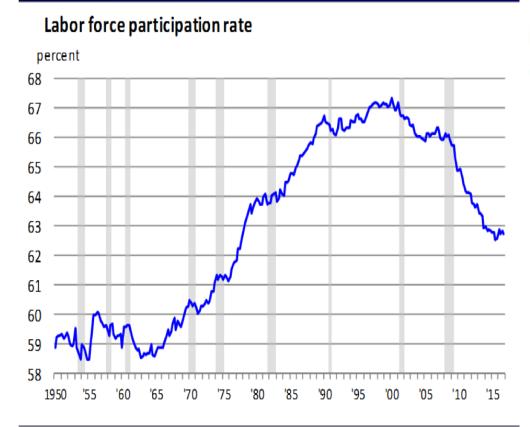




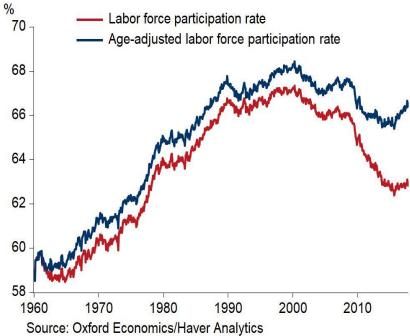
Sources: Bureau of Labor Statistics and author's calculations. Last observation: October 2017.

Sources: Bureau of Labor Statistics and author's calculations. Last observation: October 2017. The shaded area indicates NBER recession.

### DEMOGRAPHICS EXPLAIN 75% TO 80% OF THE DECLINE IN LABOR PARTICIPATION RATE

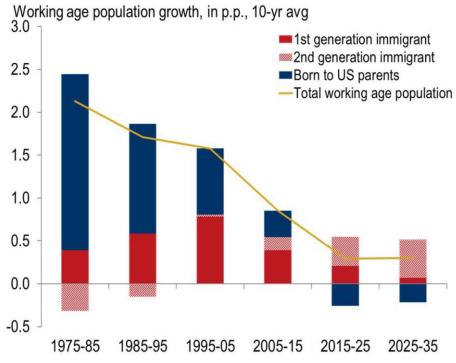


#### US: Age-adjusted labor force participation rate

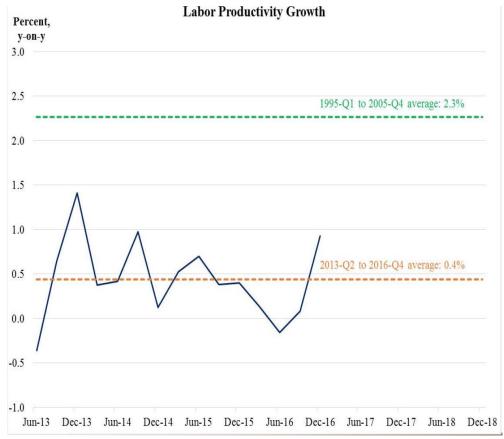


#### FASTER PRODUCTIVITY GROWTH IS THE SUREST PATH TO MORE RAPID GDP GROWTH

#### **US: Immigration Driving Labor Force Growth**



Source: Oxford Economics/Pew Research Center



#### 3Q17 PAINTED A PICTURE OF HEALTHY ECONOMIC ACTIVITY

- Real GDP grew 3.0% in 3Q17 (was 3.1% in 2Q17; 1.2% in 1Q17) driven by consumer spending, trade and inventories
- Inventories contributed 0.7 pp to GDP suggesting underlying rate remains at 2.3%.
- Consumer spending moderated from 3.3% to 2.4% with momentum from durables (hurricane car sales); service sector only up 1.5% suggesting moderating trend
- Business investment firm at 3.9% versus 6.7% in 2Q17 and 7.2% in 1Q17. Equipment strong at 8.6% (8.8% 2Q17; 4.4% 1Q17) as business remained cautious buying light equipment
- Net trade added 0.4pp to growth helped by weaker dollar and firming international demand. 2Q17 drag were structures, residential and government spending.
- Inflation remains subdued.

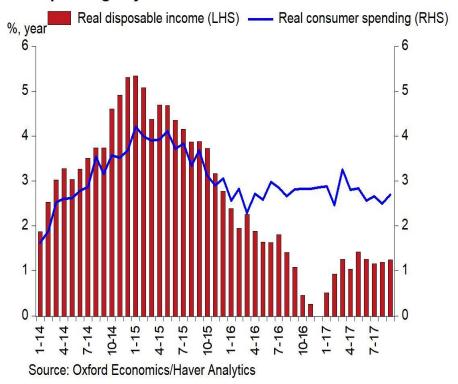
### U.S. GROWTH WILL CONTINUE IN 4Q17 AND INTO 2018 AS MANUFACTURING IMPROVES

- Consumer outlays likely to be slowing in 2018 reflecting lackluster growth of real disposable income and outlays
- Manufacturing is strengthening and should carry the economic load into 2018;
- Manufacturing should benefit from a stronger global backdrop

### CONSUMER SPENDING WILL LIKELY SLOW IN 2018 WITHOUT TAX CUT

Personal Income and Consumption								
(Percent change)	Jun/17	Jul/17	Aug/17	YoY				
Personal Income	0.0	0.3	0.2	2.8				
Disposable Income								
Nominal	0.0	0.2	0.1	2.7				
Real	0.0	0.1	-0.1	1.2				
Personal Consumption Expenditures								
Nominal	0.1	0.3	0.1	3.9				
Real	0.1	0.2	-0.1	2.5				
PCE Price Index	0.0	0.1	0.2	1.4				
Core PCE Price Index	0.1	0.1	0.1	1.3				

#### US: Spending beyond their means?



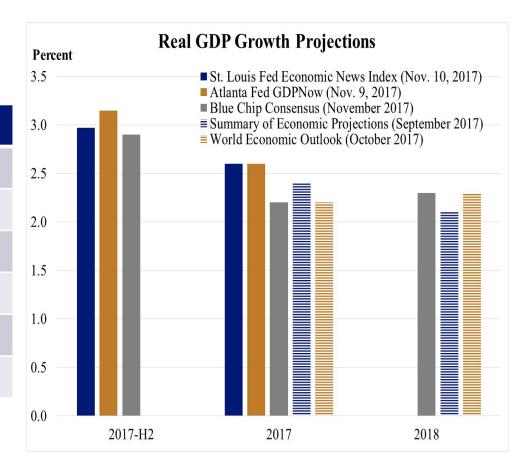
## TRACKING ESTIMATES FOR 4Q17 AND 2018 INDICATES US REAL GDP GROWTH SLOWING

#### Tracking estimates for 2017-Q4 U.S. real GDP growth

Source	Date	Estimate*	2017†
Atlanta Fed GDPNow	Nov. 9	3.3%	2.6%
CNBC Moody's Consensus (median)	Nov. 9	2.8%	2.5%
Blue Chip Consensus	Nov. 10	2.7%	2.5%
St. Louis Fed Economic News Index	Nov. 10	3.0%	2.6%
FRBNY Staff Nowcast	Nov. 10	3.2%	2.6%
Macroeconomic Advisers	Nov. 10	2.5%	2.4%

<sup>\*</sup> percent change from the previous quarter, annualized

<sup>†</sup> average of Bureau of Economic Analysis' 2017-Q1, Q2, Q3 estimate (1.2%, 3.1% and 3%, respectively) and 2017-Q4 estimates



# U.S. ISM MFG. INDEX STRENGTH (BEST SINCE 6/04 SOLID EXPANSION INTO 2018)

US: ISM Manufacturing Purchasing Managers Index

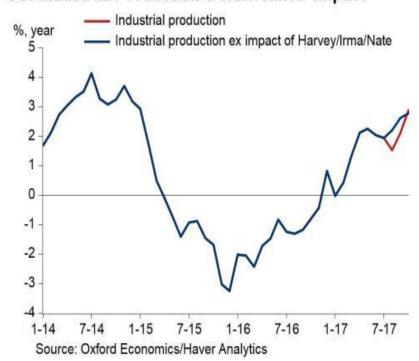


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ISM Man	ISM Manufacturing Index										
	ISM	New	Prod	Employ	Delivery	Invent-					
	Index	Orders	uction	ment	Time	ories					
Oct-16	52.0	54.1	54.4	51.8	52.2	47.5					
Nov-16	53.5	54.8	55.6	52.5	55.5	49.0					
Dec-16	54.5	60.3	59.4	52.8	53.0	47.0					
Jan-17	56.0	60.4	61.4	56.1	53.6	48.5					
Feb-17	57.7	65.1	62.9	54.2	54.8	51.5					
Mar-17	57.2	64.5	57.6	58.9	55.9	49.0					
Apr-17	54.8	57.5	58.6	52.0	55.1	51.0					
May-17	54.9	59.5	57.1	53.5	53.1	51.5					
Jun-17	57.8	63.5	62.4	57.2	57.0	49.0					
Jul-17	56.3	60.4	60.6	55.2	55.4	50.0					
Aug-17	58.8	60.3	61.0	59.9	57.1	55.5					
Sep-17	60.8	64.6	62.2	60.3	64.4	52.5					
Oct-17	58.7	63.4	61.0	59.8	61.4	48.0					
Level Ch	ange:										
Mo/Mo	-2.1	-1.2	-1.2	-0.5	-3.0	-4.5					

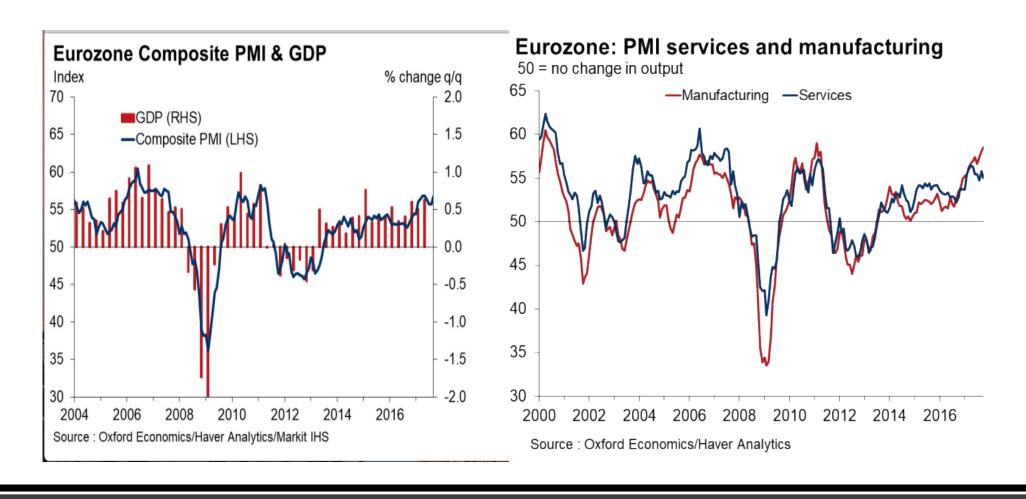
### RESULTING IN STRONGER INDUSTRIAL PRODUCTION

#### **US: Industrial Production & Hurricanes' Impact**

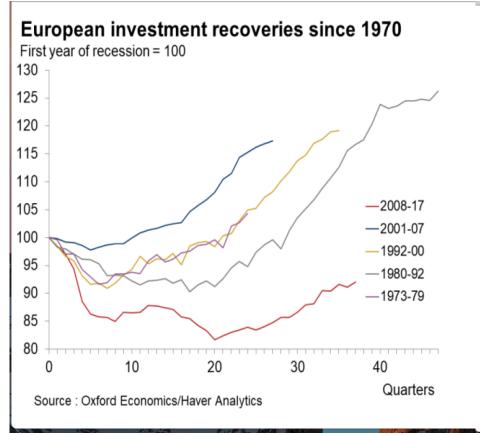


Industrial Production (annual percent change)							
	Aug/17	Sep/17	Oct/17				
Industrial Production	1.5	2.1	2.9				
Manufacturing	1.3	1.4	2.5				
Durables	1.1	2.5	2.5				
Non Durables	1.9	0.7	2.9				
Mining	8.0	10.0	6.4				
Utilities	-4.6	-2.9	0.9				
Capacity Utilization (%)	76.1	76.4	77.0				

### EUROZONE PMI SHOWS THAT MANUFACTURING IS STRENGTHENING



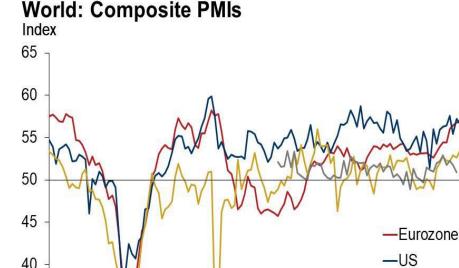
#### STRENGTHENING MFG. AND GLOBAL TRADE SUGGEST STRONGER CAPITAL SPENDING





#### (SYNCHRONOUS) GLOBAL GROWTH SHOULD CONTINUE INTO 2018

- Recent economic strength in advanced economies, including Eurozone, helped by strong trade multiplier.
- Emerging market outlooks firm to improving with potential upside in some EM's (Brazil, Russia, Turkey, India))



2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017

—Japan

—China

Source: Oxford Economics/PMI

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#### TRUMP ECONOMY: IS OPTIMISM STARTING TO WANE?

- Prior to the Trump election, expectations was for the same economic outlook as the last 8 years—
  - slow growth at best perhaps until recession,
  - bigger government, and more social/entitlement programs
  - rising deficits, ongoing FED action, low interest rates,
  - more deflationary pressures
- While most investors believed that monetary stimulus had run its course, the new President had a pro-growth platform which ought to be able to win Congressional approval in some form.

#### TRUMP ADMINISTRATION FISCAL GROWTH POLICIES PRIORITIES: STILL WAITING FOR ACTION

- Health Care—replace and/or reform Obamacare
- Reduce /eliminate regulations
- Tax Reform—lower corporate and personal tax rate; repatriate overseas cash
  - Lower and simplify the corporate tax system should enhance business investment and drive productivity gains—TRUMP 15%; HOUSE PLAN 20%; Territorial system
  - Lower PERSONAL taxes—Simplify to 3 rates-- 15%; 25% and 35%
  - Repatriation of overseas cash at lower rate
  - Short Term-uncertainty of policies could lead to caution by households and business until new rules and regulations are defined
- Infrastructure—Trump proposal \$500B over 5 years as a minimum;
  - Could be a 10 year and \$1Trillion vision
  - 4% to 7% of infrastructure usually goes into construction equipment
- Defense—increase budget 15%

### BOTTOM LINE: ECONOMIC OUTLOOK LIKELY MODESTLY BETTER IN 2017; THEN......

- Business Conditions Suggest US and Global Economic outlook will be more of the same in AT LEAST 2017 awaiting the IMPLEMENTATION OF ANY OF TRUMP POLICIES
- Business investment is increasing driven by the optimism derived from the pro-growth Trump platform—but for how long?
- Economic forecasts, have GDP improving to about 2.5% in 2017 and similar to slightly lower levels in 2018 and beyond-most forecasts including the FED do not include Trump fiscal stimulation effect.
- What's plausible? THINK GDP growth rising to the 3% RANGE if progrowth TAX CUT platform is adopted; It's now a BIG IF--- 3.5% to 4% plus growth may be a dream

#### MODERATE INDUSTRIAL DEMAND RECOVERY EXAUTO UNFOLDING IN 2017-2018

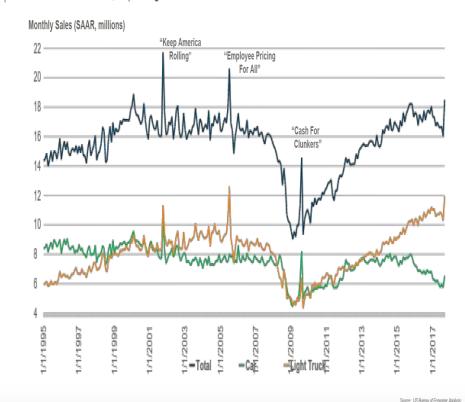
Market	2012	2013	2014	2015	2016	2017E	2018E
Auto sales(Million) / Production	14.4/15.4	15.5/16.1	16.4/17.0	17,4/17.4	17.5/17.5	17.1/17.0	16.6-16.9
Trucks (class 8)	273,000	243,000	295,000	320,000	226,480	248,000	300,000
Machine Tools	1.4%	-5.4%	3.0%	-17.6%	-1.6%	5%to10%	5%to15%
Appliance	-5%	9.4%	6.0%	-5.5%	5.6%	4%to 6%	+3%
Fluid Power	2.2%	-3.0%	+7.0%	-10.7%	-8.8%	+12% to +17%	5%to15%

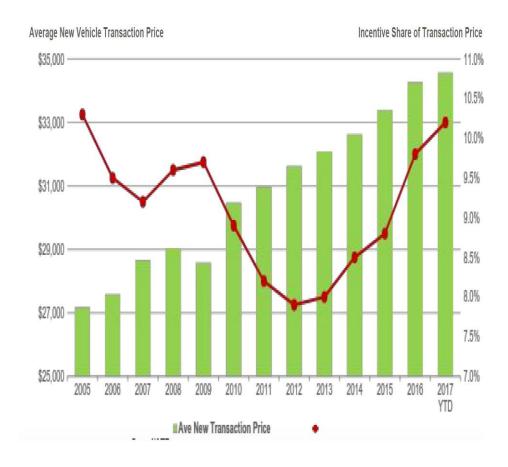
#### INDUSTRIAL MARKETS SHOULD DO WELL IN 4Q17 AND MOST OF 2018-AUTOMOTIVE

- Auto market was softening from high levels as sales weakened, inventories build and incentives rise;
- Strong October sales of 18.1M (forecast 17.5M) and exceptionally Strong September sales (18.57m annual rate vs 17.72-first up month of 2017) driven by initial vehicle replacement purchases from hurricane Harvey (500,000 plus) and Irma (200,000 plus) will raise results for few months (pull forward) and lower inventories.
- 2017 Auto sales likely modestly lower at 17.1M units. 2018 sales and production at best similar to 2017 and likely beginning to fall to trend-line 16.6M sales.

#### WEAKENING SALES AND RISING INCENTIVES ARE CLASSIC AUTO SECTOR WARNING SIGNS

Shift from cars continues, impacting both new and used markets





### INDUSTRIAL MARKETS SHOULD DO WELL IN 4Q17 AND MOST OF 2018--TRUCKS

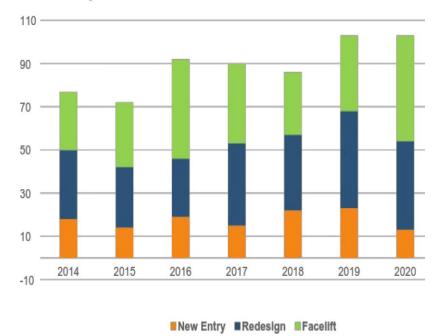
- Economic growth and Industrial Production are key drivers of truck demand.
- Class 8 indicators show the market is poised for growth. Capacity is tightening, freight is improving suggesting solid momentum into 2018. More trucks are needed to handle freight growth and productivity losses due to ELD's. Production forecast of 248,000 in 2017 (vs.226,480) should approach 300,000 or more in 2018.
- Medium duty market continues its modest growth. A strong consumer, a growing economy and increased construction spending are supporting medium truck sales. 2017 sales of 215,500 (vs. 197,757) should rise modestly to 225,000 in 2018.

#### INDUSTRIAL MARKETS SHOULD DO WELL IN 4Q2017 AND MOST OF 2018-MACHINE TOOLS

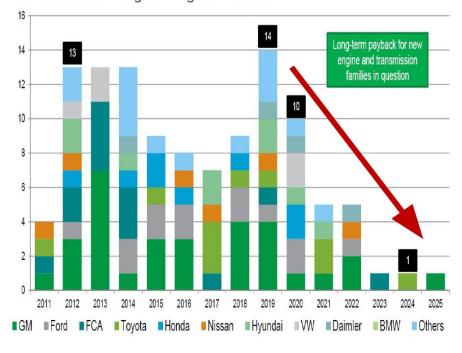
- Orders benefit from strengthening manufacturing economy; PMI highest level since 2004 helping to drive upturn in Industrial production; durable good orders and housing starts up;
- Car sales holding at high levels; projects in power train and refreshes now being implemented
- New projects heating up: GM \$1B in plants to create new jobs (1500) and lower costs; Fiat Chrysler \$1B Ohio/Michigan for 2,000 jobs and costs; Ford \$1.2B in Michigan; Toyota \$1.3B in Kentucky; BMW \$600M in South Carolina (1,000 jobs); Toyota/Mazda \$1.6B new site; Honda \$267M in Ohio (300 jobs); Volvo \$500m in South Carolina (1900 jobs); Subaru expanding Lafayette, Indiana; Daimler \$1B investment in Vance Alabama
- New Ford \$7B development program for trucks and SUV
- Machine Tool Orders likely up at least 5% to 10% in 2017 and a further 5% to 15% in 2018

#### NEW MODELS/REDESIGNS AND NEW ENGINE PROGRAMS WILL DRIVE MCHINE TOOL SALES





#### North America: Engine Program Launches



Sources: IHS Market Engine Forecast

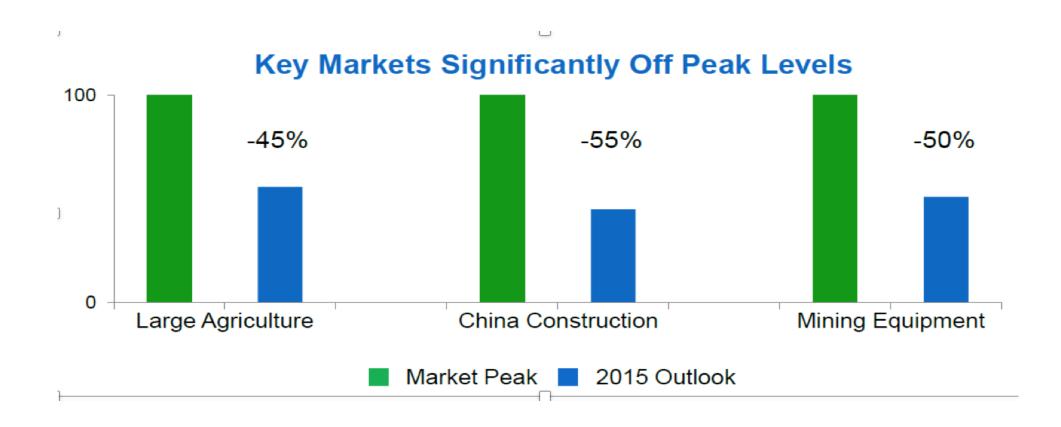
#### ELECTRIC VEHICLE DEVELOPMENTS PROGRAMS START TO ACCELERATE

- China, India, France, UK, California reviewing plans to limit or ban regular gas or diesel engines by 2030-2040. Resilt is accelerating pure electric vehicles, plug-in hybrids and fuel cell development.
- China currently plans 10% of vehicles with zero emissions by 2019; 12% in 2020 and going up each year
- GM to release 20 all electric cars by 2023; Ford announces 13 models, with \$4.5B investment over next 5 years. GM,Ford and VW have JV's in China
- Volvo all electric models by 2019; Mercedes-Benz new electric SUV or crossover by 2020 and electrify entire range of light vehicles by 2022; BMW electric powertrain option in every model by 2020 and 25 electric vehicles by 2025; VW 300 electric vehicle car line-up by 2030 with \$84B investment.

#### INDUSTRIAL MARKETS SHOULD DO WELL IN 4Q2017 AND MOST OF 2018—FLUID POWER

- F2017 demand for fluid power components projected to be up low to mid-teens benefiting from industrial machinery and construction recovery and bull-whip effect on inventory levels.
- Mining, Ag and oil field sectors have stabilized and show improved demand from MRO and inventory bull-whip.
- Recovery should continue into 2018 at a high single-digit to low double digit rate; passage of Trump agenda key to keeping demand robust

# FLUID POWER DECLINE IMPACTED BY COMMODITY SECTOR CRASH EXACERBATED BY BULL WHIP EFFECT; IT'S NOW REVERSING



#### TRUMP TAX REFORM PROPOSALS CRUCIAL TO SUSTAINING US ECONOMIC GROWTH INTO 2019

- Major Corporate tax changes include a 20% rate and establishes a maximum pass-through rate of 25%, although this provision also affects individuals
- KEY: Plan envisions 100% immediate expensing of capital investments though initially limited for 5 years; there also may be a partial limit on deductibility of interest expense;
- Future overseas earnings of US multinational corporations would be subject to a territorial tax system.
- Repatriation of accumulated earnings would be subject to a different (currently unspecified-perhaps 12%) rate depending whether earnings are liquid assets or cash. Payment liability may be spread over several years.
- INFRASTRUCTURE spending—maybe 2019 impact

#### 2019 OUTLOOK: TRUMP AGENDA KEY TO AN INDUSTRIAL MINI- BOOM OR SLOWDOWN

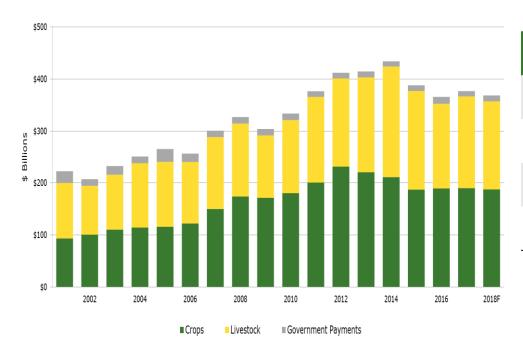
- Successful passage of Trump agenda including Tax Reform/Repatriation (which encourage investment), Infrastructure, and Deregulation will drive productivity improvement and GDP growth towards 3% or more.
- POSSIBLE MINI-BOOM FOR INDUSTRIALS WITH 2H2018 AND 2019, helped by Infrastructure. DEMAND AT LEAST AT UPPER END OF 2018 FORECASTS
- Without stimulus, signs of slowdown suggest slowing economy and possible recession: consensus F2019 forecast is currently near 2%
  - Auto sales, production and investment already slowing
  - Consumer sentiment index fading (U Michigan down 3 months in a row); US NFIB small business index softening;
  - Consumer spending is being financed by a savings dip (to 3.8% from 5%) due to slow growth in real disposable income; suggests 2% spending rate without stimulus, better wage growth or further savings dip;
  - FED liquidity program has peaked—rates rising and balance sheet shrinking

# FARM EQUIPMENT SECTOR FINALLY STABILIZING, BUT MATERIAL RECOVERY MAY TAKE SEVERAL PLANTING CYCLES

GREAT YIELDS TURNED FARMER BOOM TO GLOOM—IT IS BEGINNING TO REVERSE

### RECORD LEVEL OF U.S. FARM CASH RECEIPTS THROUGH 2014; FCR DECLINING 2015-18

**U.S. Farm Cash Receipts** 



**U.S. Farm Cash Receipts** 

(\$ billions)	2016	2017 Forecast	Previous 2017	2018 Forecast
Crops	\$189.6	\$190.1	\$186.7	\$187.6
Livestock	\$162.9	\$176.5	\$168.2	\$169.6
Government Payments	\$13.0	\$10.0	\$12.5	\$11.1
Total Cash Receipts	\$365.4	\$376.6	\$367.4	\$368.3

Source: 2001–2016: USDA, 30 August 2017 2017F-2018F: Deere & Company forecast as of 22 November 2017 Source: 2016: USDA, 30 August 2017

2017F-2018F: Deere & Company forecast as of 22 November 2017 (previous forecast as of 18 August 2017)

### NA FARM EQUIPMENT (ROW CROP TRACTORS) SALES WERE ABOVE NORMAL IN 2011-2014

	NA Tractors		NA	Combines
Year	Total	% of 10-year Average	Total	% of 10-year Averag
2014	39813	131%	11292	102%
2013	42167	138%	13104	119%
2012	35793	118%	12696	115%
2011	31178	102%	13166	119%
2010	30164	99%	12818	116%
2009	26992	89%	12215	111%
2008	30875	101%	10649	97%
2007	23512	77%	8435	76%
2006	20831	68%	7835	71%
2005	23257	76%	8067	73%
10 Year Average	30458		11028	
7 Year Average	33855		12277	

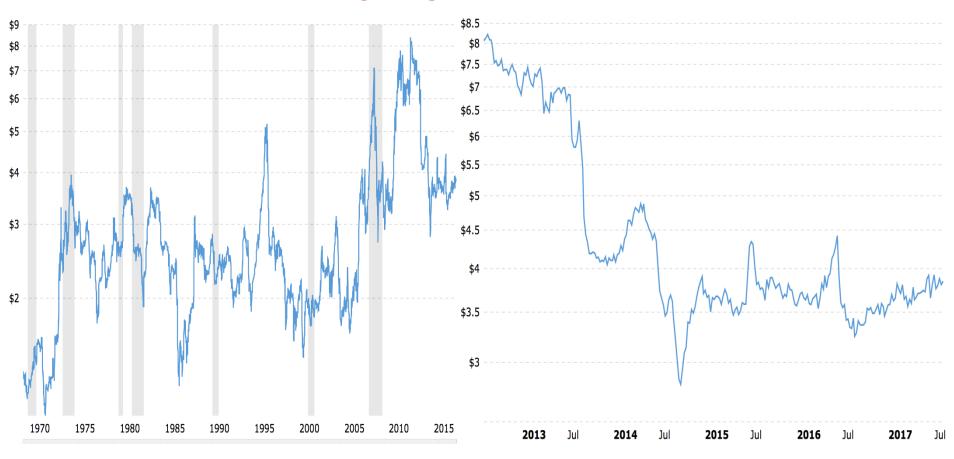
### 2012 NA DROUGHT CAUSES COMMODITY PRICE SURGE; 2014 BUMPER CROP CAUSES COMMODITY PRICE CRASH

Сгор	2010/11	11/12	12/13	13/14	14/15
Corn acres (M)	88.2	91.9	97.3	95.4	90.6
Production (bu)	12.5B	12.36B	10.76B	13.83B	14216B
Yield (bu/acre)	152.8	147.2	123.1	158.1	171.0
End stocks (bu)	1,128M	989M	821M	1,232M	1.731B
Price	\$5.18	\$6.22	\$6.89	\$4.46	\$3.70
Soybeans acres	77.4	75.0	77.2	76.8	83.3
Production (bu)	3.33B	3.09B	3.04B	3.35B	3.927B
Yield (bu/acre)	43.5	41.9	40.0	44.0	47.5
End stocks (bu)	215M	169M	141M	92M	191M
Price	\$11.30	\$12.50	\$14.40	\$13.00	\$10.10

### HOW WEAK CAN NA FARM EQUIPMENT SALES BE? WEAKER THAN MOST THOUGHT!

- NA Farm equipment sales correlate to farm income and acres planted—planted acreage needed to go down due to huge carryovers; prices continue to be below farmer break-even in major crops
- Gone were 100% Write-off (2011); Bonus Depreciation and Section 179 incentives (Expired end of 2013; renewed temporarily in last 2 weeks 2014).
- Bonus depreciation renewed for 2017 (at 50%), then phased down to 2019; (30%); Section 179 now permanent (at \$500K); but farmer needs to make money to spend money.
- Large Tractor sales averaged 22,000 to 25,000 units in 1980's and 1990's

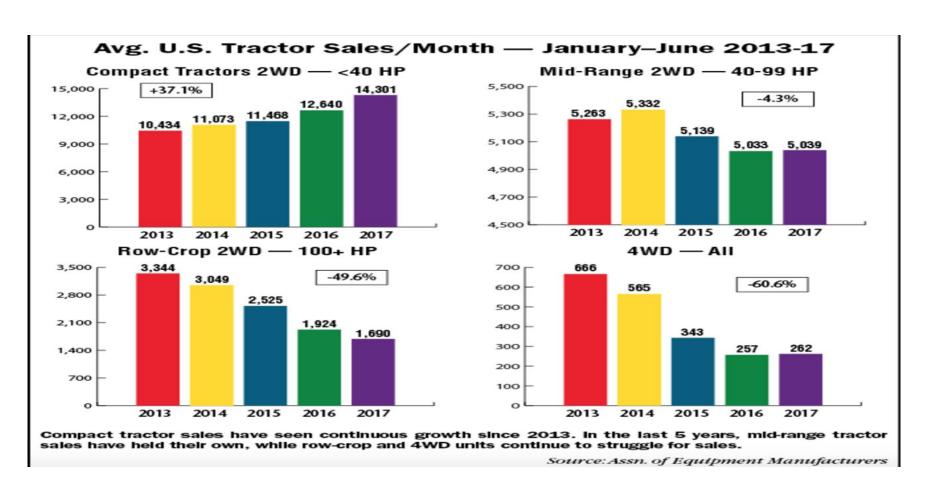
### CORN PRICES CAN STAY DOWN AND VOLATILE FOR AN EXTENDED PERIOD OF TIME



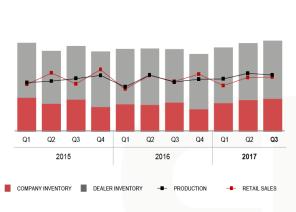
### BIG CROPS DRIVE BIG CARRYOVERS AND DEPRESS COMMODITY PRICES

Crop	2014/15	2015/16E	2016/17E	2017/18E
				NOV 2017
Corn acres (M)	90.6	88.0	94.0	90.4
PRODUCTION	14.216B	13.602B	15.148B	14.578B
Yield (bu/acre)	171.0	168.4	174.6.0	175.4
End stocks (bu)	1,731	1,737M R	2,295M	2,487
Price	\$3.70	\$3.61R	\$3.36	\$2.80-\$3.60
Soybeans acres	83.3	82.7	83.4	90.2
Production (bu)	3.927B	3.926B	4.296B	4.425B
Yield (bu/acre)	47.5	48.0	52.0	49.5
End stocks (bu)	191M	197M R	301M	425M
Price	\$10.10	\$8.95 R	\$9.547	\$8.45-\$10.15

### LARGE FARM EQUIPMENT SALES STILL SOFT, BUT OTHER MARKETS STABILIZING



### PRODUCTION HAS STABILIZED FOR FARM EQ EXCEPT FOR THE KEY HHP TRACTOR SEGMENT



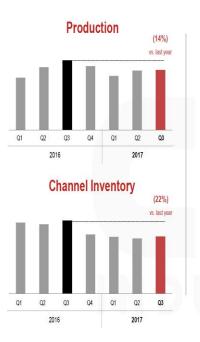
#### **Tractors**

- Q3 2017 overproduction vs. retail at 4%
- NAFTA (140+/4WD) (1)
  underproduction vs. retail at 9%
- Production up 14% vs. Q3 2016

#### Combines



- Q3 2017 overproduction vs. retail at 10%
- NAFTA (1) overproduction vs. retail at 16%
- Production up 31% vs. Q3 2016





(1) Included in row crop sector definition

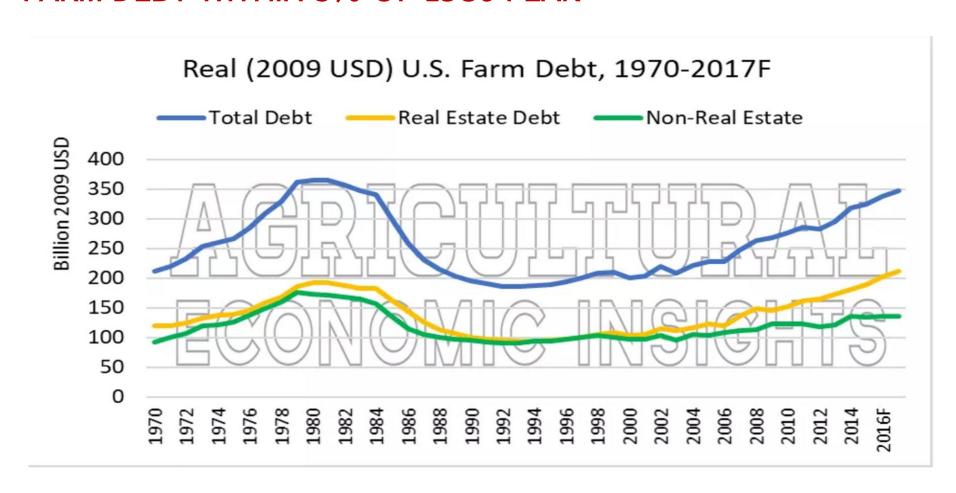
(1) Source: New sales data from AEM, used sales data from UCC database



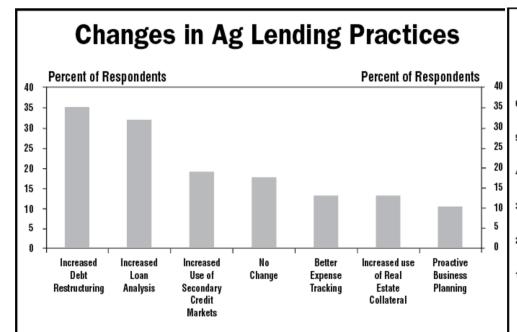
### FARM EQUIPMENT 2017 OUTLOOK: SALES STABILIZING AS INVENTORY LEVELS ARE REDUCED

- North America TRACTORS (small and medium) are flat to up 5% and COMBINES look up 5% to 10%
- High Horsepower TRACTORS down another (5% to 10%) in F2017;
  - We are well below 22,000 large tractor sales;
- EMEA Flat to up 5%; LA +10% TO +20%; APAC Flat to UP +5%
- Equipment manufacturers continue to reduce inventories (new and used)
- F2018 will benefit from inventories reduction that should help production match retail sales

### FARM SECTOR WEAKNESS HAS CAUSED INFLATION ADJUSTED FARM DEBT WITHIN 5% OF 1980 PEAK

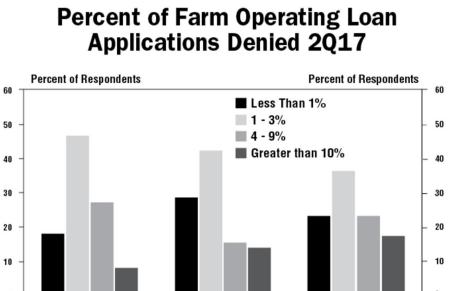


### BANK LENDERS INCREASING FARM LOAN ANALYSIS



Nearly 30% of bankers surveyed reported an increase in loan analysis, including use of secondary credit markets, better expense tracking and increased collateral requirements.

Source: Federal Reserve Bank of Kansas City



In the second quarter, about 17% of bankers reported that they denied at least 10% of all new farm loan requests, up from the previous 2 years.

2016

2015

Source: Federal Reserve Bank of Kansas City

2017

### CREDIT COMPANY BALANCE SHEET EXPANSION HELP FARM EQUIPMENT COMPANIES HOLD EARNINGS

- Farm Equipment Companies aggressively expanded their balance sheet with (shorter-term) leasing-(now 20% to 25% of sales; acceptable accounting/usually retail order based)
- DE equipment on operating lease at year-end F17 was \$6.59B (vs \$5.9B); DE FINCO at \$3.08B at year end F17 (vs. \$3.24B).
- Selling \$3.2B of equipment to credit company allows for absorption of \$600M of overhead costs helping earnings by as much as \$1.25 to\$1.50; Difference between \$3.00 and \$4.50?

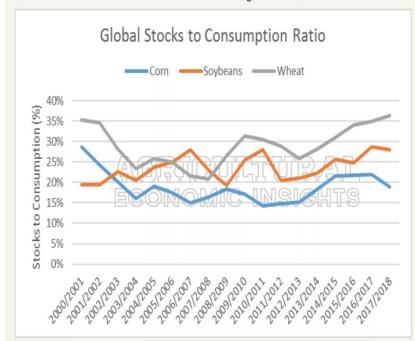
FINCO		2012	2013	2014	2015	2016
DE FINCO EQ ON OP		\$1.56B ACQ.	2.10B	\$2.68B	\$3.04B	\$3.24B
DE EQ ON	OP LEASE	\$2.52B	\$3.15B	\$4.02B	\$4.97B	\$5.90B

### FARM SUPPLIERS LED BY DEERE HAVE ALSO BECOME BANKERS TO THE FARMERS

- Farmers finding it harder to get bank lending to plant crops; funds needed for seed, chemicals, fertilizer as well as equipment
- Many farm suppliers are providing lending including farm equipment companies, Monsanto, Dupont, Dow, Ag Coops;
- Deere is now the #5 agricultural lender behind Wells Fargo, Rabobank, Bank of the West, and Bank of America
- FARMERS cash flow BEING HELPED BY WIND BEING THE NEW ETHANOL!!!

### CARRYOVERS ARE UP BUT CHINA HAS A LOT IN STORAGE

Global corn stocks reached a low of 14% of consumption in 2010/2011 before hitting 22% in 2014/2015. Global soybean stocks hit a low 19% in 2008/2009 and recently reached 29% in 2016/2017. Wheat stocks ratio reached 21% in 2007/2008 before reaching 36% in 2017/2018.



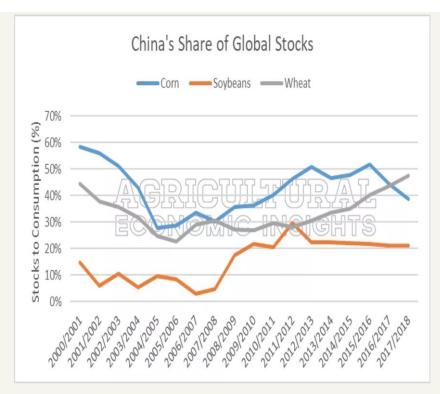


Figure 1. Global Stocks to Consumption Ratio for Corn, Soybeans, and Wheat, 2000/2001 to 2017/Figure 2. China's Share of Global Stock, Corn, Wheat, and Soybeans. 2000/2001 to 2017/2018. Data Source: UDSA's FAS.

### CARRYOVERS ARE UP BUT STILL VULNERABLE TO A WEATHER EVENT

Global Stocks to Consumption Ratio			Global Stocks to Consumption Ratio - Less China						
		2017/	2000/2001 to	1960/1961 to			2017/	2000/2001 to	1960/1961 to
	2016/2017	2018	2017/2018 Avg.	2017/2018 Avę		2016/2017	2018	2017/2018 Avg.	2017/2018 Avg.
Corn	22%	19%	19%	23%	Corn	12%	12%	11%	14%
Soybeans	29%	28%	24%	18%	Soybeans	23%	22%	20%	17%
Wheat	35%	36%	29%	30%	Wheat	20%	19%	19%	22%

### 2018 FARM SENTIMENT MODERATELY POSITIVE DESPITE LOW COMMODITY PRICES

Revenue Outlook for New Equipment — 2018 vs. 2017 (% of survey respondents)							
New Equipment North America U.S. Canada						ada	
Revenue Outlook	2018	2017	2018	2017	2018	2017	
+8% or More	6.6%	4.2%	6.3%	3.8%	7.9%	6.4%	
+2-7%	39.9%	18.2%	40.6%	14.7%	36.8%	38.7%	
Little or No Change	36.6%	44.9%	35.4%	46.0%	42.1%	38.8%	
-2-7%	10.8%	18.7%	11.4%	20.2%	7.9%	9.7%	
-8% or More	6.1%	14.0%	6.3%	15.3%	5.3%	6.4%	
Weighted Avg.	1.35%	-0.81%	1.31%	-1.16%	1.51%	1.44%	

### ONLY A WEATHER EVENT CAN DRIVE A MATERIAL TURNAROUND IN 2018-2020

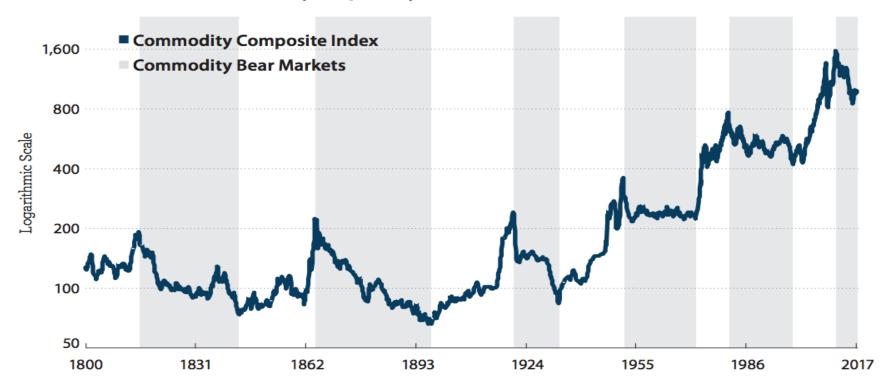
- A weather effect is the only event that could help the AG sector REBOUND materially in 2018-2020. We are having good to great crops outside NA so far led by Latin America; carryovers in the US and globally will still likely be well above normal.
- For now, plan NA Farm equipment demand being up moderately in 2018 perhaps 5% to 15% from current low levels. ROW is likely flat to up 5%. Near-term upside limited by the huge leasing effort of the past several years
- Inventories should be close to balance enabling farm equipment manufacturers to produce at retail levels.
- WEATHER will still be THE major issue to watch; Is a La Nina event possible in 2018/19?

### COMMODITY SECTOR CAPITAL SPENDING BEGINS TO STABILIZE AND RISE IN 2017

OIL AND GAS, METAL MINING, AND COAL SECULAR DECLINES END AND BEGIN A MODEST REBOUND

### COMMODITY SUPERCYCLES TEND TO BE LONG-LIVED

#### A Look at Past Commodity Super-Cycles



## BEAR-MARKET SUPER-CYCLES ARE LONG (AVERAGE 20 YEARS); BUT MOST OF PRICE DAMAGE HAPPENS IN FIRST 5 YEARS

#### **Commodity Bull Super-Cycles**

	PERCENTAGE GAIN	LENGTH (YEARS)
1802–1814	73.9%	12.1
1843-1864	208.2%	21.6
1896–1920	269.7%	24.0
1933-1951	331.5%	18.3
1971–1980	249.5%	9.1
1999–2011	277.2%	12.2
Average Bull	235.0%	15.9

#### **Commodity Bear Super-Cycles**

	PERCENTAGE LOSS	LENGTH (YEARS)
1814-1843	-62.2%	28.3
1864–1896	-70.7%	31.8
1920-1933	-65.7%	12.8
1951–1971	-38.6%	20.4
1980-1999	-45.7%	18.6
Current Bear	-40.9%	6.0
Average Bear	-54.0%	19.6

Sources: Bloomberg and Wells Fargo Investment Institute. Monthly data: January 31, 1800, through March 31, 2017.

### OIL PRICES STILL LIKELY TO BE RANGE BOUND IN 2017-18: RANGE IS HIGHER AT\$45 TO \$67

Price Summary				
	2015	2016	2017	2018
<b>WTI Crude Oil<sup>a</sup></b> (dollars per barrel)	48.67	43.33	49.70	51.04
Brent Crude Oil (dollars per barrel)	52.32	43.74	53.01	55.61
<b>Gasoline<sup>b</sup></b> (dollars per gallon)	2.43	2.15	2.40	2.45
<b>Diesel<sup>c</sup></b> (dollars per gallon)	2.71	2.31	2.65	2.83
<b>Heating Oil<sup>d</sup></b> (dollars per gallon)	2.65	2.10	2.51	2.71
<b>Natural Gas<sup>d</sup></b> (dollars per thousand cubic feet)	10.36	10.04	11.07	10.92
Electricity <sup>d</sup> (cents per kilowatthour)	12.65	12.55	12.90	13.24
a Mart Tarras Internas dieta				

<sup>&</sup>lt;sup>a</sup> West Texas Intermediate.

- EIA still forecast range bound oil prices but at higher levels.
- BRENT \$53/b (was \$51) in 2017; \$56/b (was 52) in 2018
- WTI now \$5/b (was \$2) less than BRENT
- February 2018 NYMEX contracts \$45 to \$67 with 95% confidence levels.
- Upside price risk due to synchronous global growth and politics

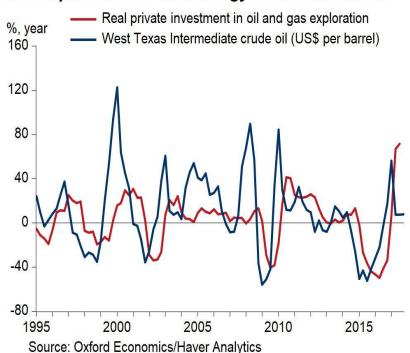
<sup>&</sup>lt;sup>b</sup> Average regular pump price.

<sup>&</sup>lt;sup>C</sup> On-highway retail.

<sup>&</sup>lt;sup>d</sup> U.S. Residential average.

### HIGHER ENERGY PRICES OVER \$50 WILL DRIVE INCREASED ENERGY INVESTMENTS

#### US: Oil price moves lead energy sector investment



Total Industry CapEx During the "investment boom" in a high oil price environment, many oil and gas customers executed capital projects very 2010-2014 quickly, often sacrificing execution to bring projects online as fast as possible - Speed was paramount to deliver increased revenue, not efficiency or operational excellence In the "industry reset" low oil price environment, new capital projects were 2015-2016 delayed and poor performing assets were closed, as customers instead focused on maximizing efficiency of their higher performing assets In the "new normal" paradigm, we expect many customers to maintain caution with

their new project spending, but

maintenance and replacement will grow

roughly in line with demand growth.

Meanwhile, remaining producers can operate profitably at \$50-60 oil

ource: IHS Economics and Emerson Estimates

### HIGHER ENERGY AND COMMODITY PRICES WILL SPUR INVESTMENTS-EMERSON ELECTRIC

Process	Process Industries		NA Upstream shale recovery as costs decline; future uptick expected from AP, MEA NOC's
2017	2017-2019	Oil & Gas Midstream	NA expansion with Natural Gas exports; EUR LNG investments to offset supply concerns
		Refining	Fuel regulations driving spend in U.S., MEA, AP
		Chemical	NA Ethylene capacity buildout continues
		Power	Continued AP investment; NA Coal to gas
Hybrid I	Hybrid Industries		Significant biotech investments in Ireland; generics growth in AP and NA
2017	2017-2019	Food & Beverage	Global investment in operational improvement and food safety
2017	2017-2019	Metals & Mining	Global copper recovery supported by strong power grid investments
	_	Pulp & Paper	Bio-product capacity additions in EUR; strong consumer demand in AP
Discrete	Industries	Automotive	Growth in production and new model programs in NA, Emerging Markets
2017	2017-2019	Special Machinery	Continued automation across industrial manufacturing segments
		Consumer Packaged Goods	Convenience segment driving U.S. and China packaging growth

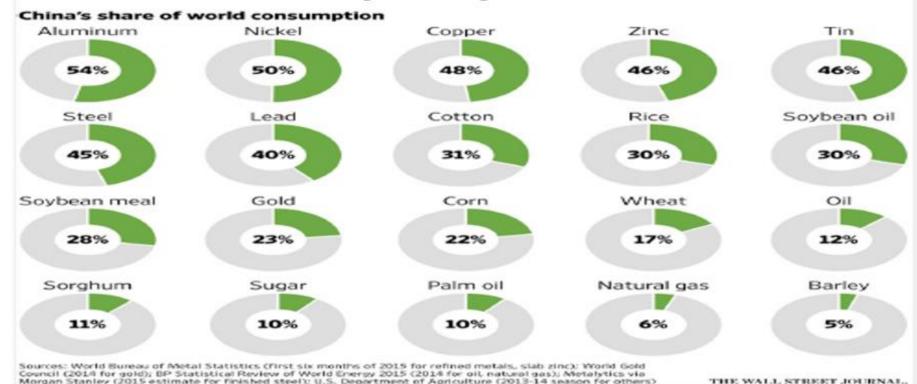
### COMMODITY SECTOR CAPITAL SPENDING 2017: THE BOTTOM IS HERE

- Virtually all end markets for commodity related capital spending appear to be at least bottoming entering 2017
- Mining NEW equipment demand still soft but has likely bottomed as commodity prices rise; MRO by necessity is over, spending now rising!
- Weak power generation markets and political and environmental opposition to coal continues to place pressure on demand; New regulations will likely stabilize U.S. coal industry.

#### CHINA STILL KEY DRIVER OF COMMODITY DEMAND

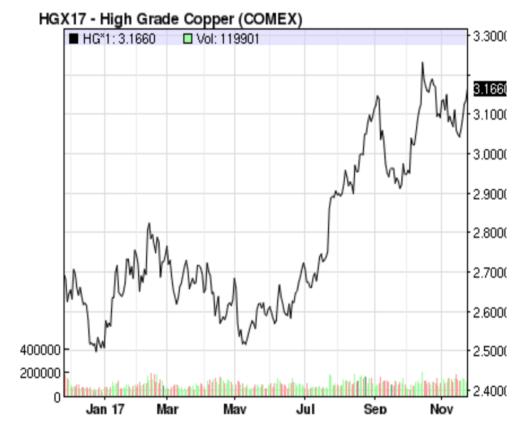
#### **Giant Appetite**

The main customer for a range of commodities is China, which will continue to wield enormous influence even as slowing economic growth cuts into its demand.

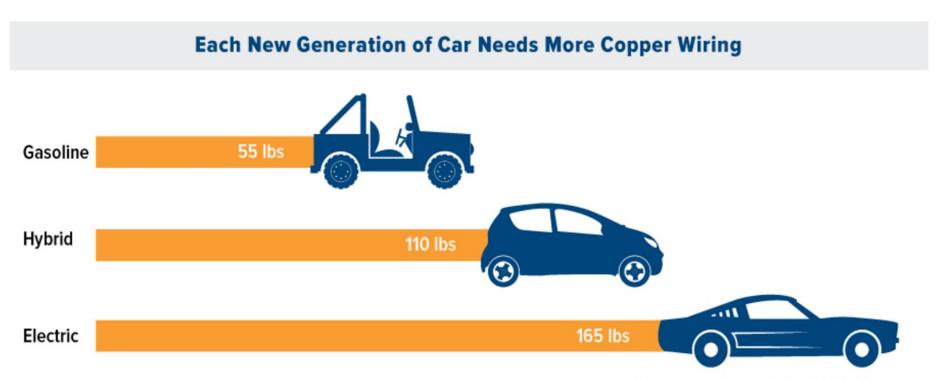


### COPPER MARKET APPROACHING A REAL TURN? NOT YET BUT ITS COMING

- Copper has benefited from weaker dollar, synchronous global growth, strong China PMI, and supply disruptions (Chile and Indonesia) and capacity delays leading to lower production.
- Expected production surplus in 2017 and 2018 may now be a modest shortfall; China demand should slow



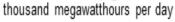
# GROWING NUMBER OF ELECTRICAL VEHICLES WILL FUEL A NINE-FOLD INCREASE IN AUTO COPPER DEMAND OVER NEXT DECADE

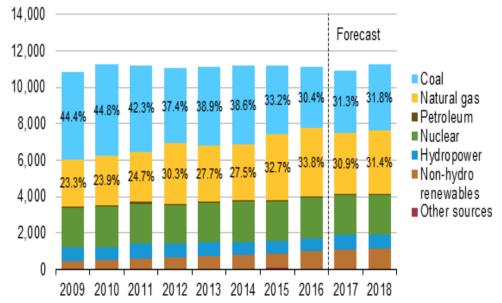


Source: Visual Capitalist, U.S. Global Investors

### ELECTRICAL GENERATION: NATURAL GAS SURPASSES COAL

#### U.S. electricity generation by fuel, all sectors





Note: Labels show percentage share of total generation provided by coal and natural gas.

Source: Short-Term Energy Outlook, September 2017.



- U.S. demand for electricity has declined in 7 out of last 10 years
- EIA projects electrical demand to decline about 0.5% in 2017 (milder temperature) and increase 1.7% in 2018; Demand declined in 2016 (-0.2%) and 2015 (-0.1%).
- Electricity from Natural gas exceeded coal in 2016. Similar percent output in 2017 and 2018 as coal recovers modestly because of higher natural gas prices.

### COAL DEMAND HAS REACTED TO RISING NATURAL GAS PRICES



- Coal sector was a very troubled industry; major producers went bankrupt;
- James River 4/14; Walter Energy 7/15; Alpha Nat Resources 8/15; Arch 1/16; Peabody 4/16
- Natural gas preferred fuel for electrical generation; but higher prices above \$3/mmBTU causes shift back to coal. Projected average price for 2017 and 2018 is currently \$3.01 and \$3.10

#### TRUMP POLICIES HAS STABILIZE COAL SECTOR

- Trump Presidency changes the status quo as his policies to support fossil fuels will ultimately stimulate and unleash domestic oil and gas production and improve the transportation of product around the country.
- Focus on coal sector initially has stabilize industry; Coal companies reorganized and emerged from bankruptcy/or went public
- Changing EPA regulations may reduce near-term plant closures allowing current coal production to continue and possibly to improve modestly
- 2017 U.S. Coal production projected to rise about 8.5% to 790M tons driven by exports from 728M in 2016 (-18.8%); 897M in 2015 (-10.3%)
- 2018 coal production projected to be about flat to up 2% to 805M tons
  - Higher natural gas prices averaging \$3.00/mmBTU or more in 2017 will help coal production as utilities switch to the lower cost fuel
- MRO and modest refurbishment/replacement of equipment underway; CAT mining truck shipments will likely triple in 2017 from 70 in 2016 (peak 1700)

# CONSTRUCTION EQUIPMENT: SECTOR TURAROUND UNDERWAY AS ENERGY IMPACT HAS ENDED

MID-DECADE PAUSE CAME TO AN END AS USED EQUIPMENT OVERHANG FROM EXCESS OIL-FIELD CONSTRUCTION EQUIPMENT DISSIPATES

### KEY DRIVERS OF CONSTRUCTION EQUIPMENT SPENDING HAVE BEEN MIXED

- Housing –slow recovery from collapse in 2008/09 back toward more normal level of 1.3 Million to 1.5 Million growth in starts
- Non-Residential construction spending recovery has been slow but appears to be improving; Strong growth in Private Non-Res and No Growth in Public
- Mining collapse means huge decline of very large, profitable machine demand; but demand has likely bottomed
- Rental companies drive construction machinery upturn as percentage of sales to Rental rises from 35% at the beginning of the decade to over 55% today
  - Access Equipment and cranes are over 85% sold to Rental Companies
  - Beside construction spending, Replacement is a key driver of equipment purchases to reduce average age of fleet
  - Decline of energy prices created excess equipment which needed to be redeployed placing pressure on equipment utilization, and rental rates.

# HOUSING OUTLOOK 2017-19: CONTINUED GRADUAL RECOVERY ACCORDING TO THE NAHB (WHICH IS ABOUT CONSENSUS)

	2013	2014	2015	2016	2017	2018	2019
Housing Activity (000)							
Total Housing Starts	928	1,001	1,107	1,177	1,191	1,255	1,312
Single Family	620	647	712	784	844	911	975
Multifamily	308	355	395	393	347	344	338
New Single Family Sales	430	440	503	561	612	656	702
Existing Single-Family Home Sales	4,475	4,338	4,627	4,828	4,877	4,845	4,944
Interest Rates							
Federal Funds Rate	0.13%	0.13%	0.38%	0.63%	1.13%	1.88%	2.389
90 day T Bill Rate	0.06%	0.03%	0.05%	0.32%	0.93%	1.63%	2.13
Treasury Yields:							
One Year Maturity	0.13%	0.12%	0.32%	0.61%	1.15%	1.88%	2.40
Ten Year Maturity	2.35%	2.54%	2.14%	1.84%	2.34%	2.52%	2.85
Freddie Mac Commitment Rates:							
Fixed Rate Mortgages	3.98%	4.17%	3.85%	3.65%	4.00%	4.20%	4.679
ARMs	2.88%	3.02%	2.94%	2.88%	3.14%	3.28%	3.75
Prime Rate	3.25%	3.25%	3.26%	3.51%	4.14%	4.98%	5.48

### HOWEVER, OVERALL CONSTRUCITON SPENDING IMPROVING SLOWLY IN 2017

- Construction spending still improving slowly;
- September spending up 0.3% from higher public construction spending;
- Residential spending was flat
- Private non-residential spending fell -0.8%; public spending rose 2.5% from state and local and not sustainable

#### US: Construction put-in-place



Source: Oxford Economics/Census Bureau

### NON-RESIDENTIAL SPENDING EXPECTED TO BE MIXED BUT GROWING

#### 2016 summary, 2017-18 forecast

	2016 actual	2017 forecast	2018 forecast
Total spending	6%	3-5%	2-7%
Private – residential	11%	7-9%	6-9%
– nonresidential	8%	2-4%	1-5%
Public	-1%	-4 to -6%	-3 to 3%
Goods & services inputs PPI	2%	2.5-3.5%	3-4%
Employment cost index	2.2%	2.5-3%	3-4%

Source: actuals: Census, BLS; forecasts: Author's estimates



### EARLY 2017 CONSTRUCTION OPTIMISM STARTING TO WANE

- Early 2017 Construction Outlook Was Quite Optimistic
  - 2016 construction spending ended strongly
  - 2017 expected to be year of federal fiscal policy providing momentum
  - Tax reform and financial deregulation could unleash investment capital; repeal of Affordable Care Act reduce small business financial burden
  - Expected Trillion dollar infrastructure program
- Mid-2017: Euphoria Is Disappearing
  - 2% economic growth in 1H2017 with some 2H17 improvement from manufacturing
  - Trump agenda delayed
  - Infrastructure program on hold as Congress focus is on Tax Reform

### MODERATING ECONOMIC GROWTH TRIGGERS REDUCED CONSTRUCTION FORECAST

- Growth projections for construction spending are being reduced for 2017 and 2018 to reflect slower economic growth and delay in Trump agenda;
- Consensus forecast for non-residential spending now 3.5% to 4% for 2017 (was 5.6% at start of year).
  - Commercial outlook still at high single digits;
  - Industrial marked down to -6.6% compared to modest gain; Institutional outlook now about 3.5% (was 5.7%)
- 2018 consensus forecast of 3.5% to 4% compares to prior projection of 4.9%; reflects slower growth of 2H17 into 2018
  - Commercial still performing in line with prior estimates;
  - Industrial modest gains of 1.1% (was 3.3%) and institutional 4.1% (was 5.8%)

# MODERATING ECONOMIC GROWTH AND TRUMP AGENDA DELAY LEADS TO REDUCED CONSTRUCTION FORECASTS

Percent Change	Year-over-Year		
	2017	2018	
Commercial Total	8.8%	4.0%	
Office	8.9%	4.0%	
Retail and Other Commercial	10.0%	4.6%	
Lodging/Hotel	6.1%	2.4%	
Industrial Total	-6.6%	+1.1%	
Institutional Total	3.5%	4.1%	
Healthcare	0.9%	3.5%	
Education	4.9%	4.8%	
Religious	-9.2%	-1.0%	
Public Safety	1.4%	3.7%	
Recreation & Amusement	7.1%	3.0%	
Non-Residential Total	3.8%	3.6%	
Consensus High	4.4%	5.5%	
Consensus Low	3.0%	1.7%	

Source: American Institute of Architects (AIA) – As of July 28, 2017 (most recent estimates)
Includes: Dodge, IHS Economics, Moody's Economy, FMI, CMD, Associated Builders & Contractors and Wells Fargo Securities

## FAST ACT NO REAL HELP IN 2016-17 INFRASTRUCTURE SPENDING

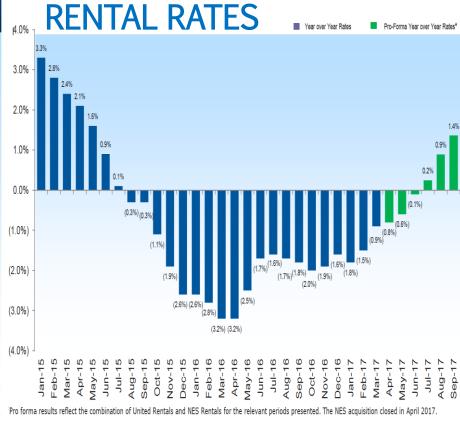
- Congress passed the Fixing America Surface Transportation Act in late 2015 (signed Dec 4);
  - \$305B over a 5 year period; first longer-term bill since Sept 2009.
  - Does not fund everything' some money will need annual budget approval;
  - Reauthorizes 18.4 cents-per-gallon gas tax used to pay for highway and transportation projects; also transfer \$70B from other gov't pockets to make up for annual deficit in transportation due to fuel efficiency of cars and trucks
  - Smoke and mirror financing of programs eg selling 66 million of barrels of oil from strategic reserve to raise \$6.5B—implies \$98 barrel. Sales don't start until 2023 or 3 years after bill expires.
- The FAST ACT DID NOT HELP MACHINERY DEMAND in 2016, and probably not much 2017-18; perhaps ONLY lend stability to highway sector to stimulate increased state spending
- Bonus depreciation extended through 2017 at 50%; phases down to 40% in 2018 and 30% in 2019; Section 179 benefits (\$500K) made permanent

# NA RENTAL COMPANIES DRIVE CONSTRUCTION EQUIPMENT PURCHASES

- Rental companies now account for as much as 55%-60% of construction equipment purchases in NA; We believe Rental Companies buy
  - Over 55% of earthmoving equipment
  - 85% to 90% of AWP's, Cranes and Material Handling equipment
- Rental companies continually reassess current relatively spending plans looking at utilization and rental rates, the implementation of Final Tier 4, and the recognition of excess fleet in the field (believed to have peaked at 1% to 2%) due to the energy/oil price decline requiring redeployment of equipment coming back from the oil field.
- Used Tier 4 equipment have difficulty in export markets-25% more expensive than older versions and added cost of "de-tiering" kit do to fuel differences

#### RENTAL UTILIZATION AND RATES RISING; RENTAL CO. SPENDING IS STARTING TO IMPROVE

Time Utilization					
	2015	2016	2017	YoY	
January	63.7%	62.2%	64.1%	2.1 pt	
February	63.9%	64.3%	65.9%	1.6 pt	
March	64.9%	65.9%	68.1%	2.2 pt	
April	65.7%	67.5%	68.6%	1.1 pt	
May	66.6%	67.2%	69.6%	2.4 pt	
June	67.7%	68.0%	70.0%	2.0 pt	
July	68.6%	69.2%	70.4%	1.2 pt	
August	70.0%	70.0%	71.5%	1.5 pt	
September	71.3%	71.7%	73.6%	1.9 pt	
October	72.0%	72.8%			
November	68.7%	69.6%			
December	63.8%	65.5%			



#### 2017 CONSTRUCTION EQUIPMENT OUTLOOK SEEING STRONGER SECOND HALF POTENTIAL

- 2017 outlook improving from Flat to perhaps as much as +5%-10% in NA; 2018 could be a much better year depending on execution of Trump Policies
  - 1H17 up low to mid single digits; Activity reflects lower activity in larger machines and cautious approach to rental fleet expansion;
  - Mid to Upper Single digit or more gains possible in 2H17 as construction spending rises;
  - AWP and Crane demand still weak but improving (now +/-3% in 2017); demand should improve at least mid-single digits in 2018

## CONSTRUCTION EQUIPMENT SECTOR HAS POTENTIAL FOR IMPROVING GROWTH

CONSTRUCTION EQ. SALES	<b>▼</b> 2017E	<b>2017E</b>	<b>▼</b> 2018E <b>▼</b>
REGION	LIGHT EQUIPMENT	HEAVY EQUIPMENT	
NAFTA	10% PLUS	FLAT TO +5%	10% TO 15%
EMEA	5% TO 10%	5% TO 10%	5% TO 15%
LATIN AMERICA	FLAT TO +5%	10% PLUS	5% TO 15%
APAC	20% TO 25%	35% TO 40%	10% TO 20%
WORLDWIDE	5% TO 15%	5% TO 15%	10% TO 15%

- 2017 OUTLOOK FOR CONSTRUCTION EQUIPMENT DEMAND IS IMPROVING
- MID-SINGLE TO LOW DOUBLE DIGIT GAINS POSSIBLE FOR 2H17;
- BROAD 10% TO 15%+ GAINS POSSIBLE FOR 2018 DEPENDING ON EXECUTION OF TRUMP POLICIES
- WATCH OUT FOR THE EXTENSION OF THE SHARING ECONOMY—AN UBER OR AirBNB (YardClub (CE) or MachineryLink (AG)

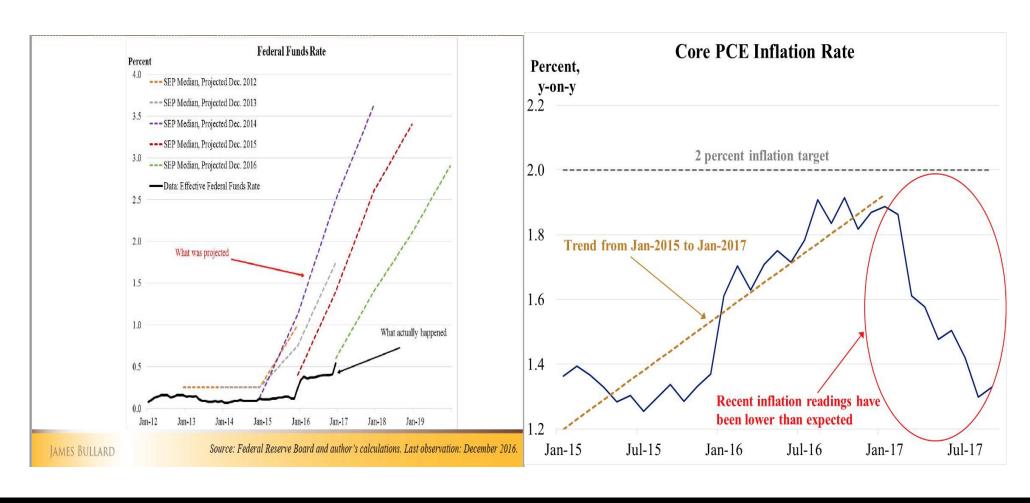
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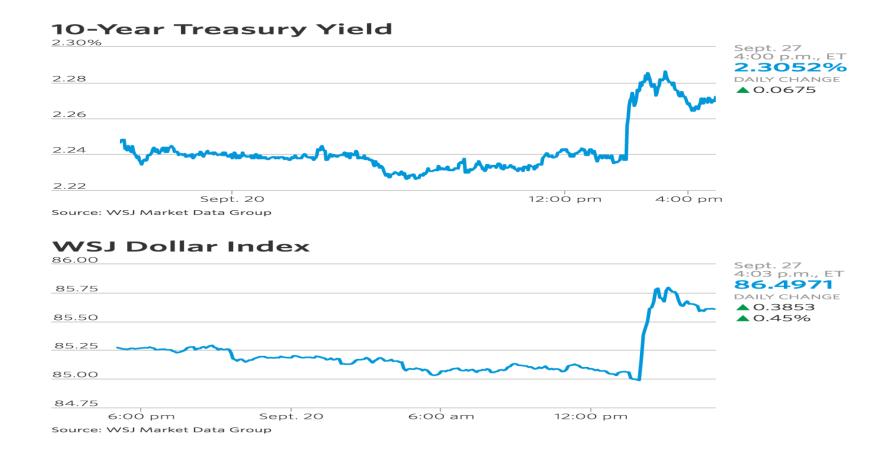
#### APPENDIX

**MISCELLANEOUS** 

#### FOMC PROJECTIONS ARE WELL OFF THE MARK; INFLATION REMAINS LOWER THAN EXPECTED



# ODDS NOW FAVOR INTEREST RATE RISE IN DECEMBER;



#### FED SEPT MEETING SETS STAGE FOR RATE INCREASE IN DEC; IS IT 2 OR 3 IN 2018?

- Odds of Dec. rate increase shifted from 25% to 75% after Fed meeting in Sept. AND NOW STANDS AT 93% TO 99%.
- Low inflation and uncertainty about shortfall "strengthens the case for gradual adjustments." "We should also be wary of moving too gradually". "Imprudent" to keep monetary policy on hold until inflation reaches 2% given the risks from excessive leverage and "potential implications for financial stability".
- Financial markets have handled the onset of balance sheet normalization. Economic data implies continuing low GDP growth for the foreseeable future, and weaker inflation, suggesting current interest rate policy is appropriate. The FED does have an easy way out if suggested by economic conditions

# INDUSTRIAL MARKETS SHOULD DO WELL IN 4Q2017 AND 2018--APPLIANCES

- NA demand growing at a 4% to 6% rate in 2017 driven by the ongoing multi-year replacement cycle, strong housing demand, and improving economy with lower unemployment and modest wage gain. 2018 looks like trend-line 3% to 5% growth.
- EMEA growth remains modest at flat to up 2% as Russia and E. Europe stabilizes after several weak years. Western Europe is improving and should drive 1% to 3% growth next year.
- Asia demand is flat to up 2% with favorable India trends and weak China demand. Forecast of trend-line 5% to 7% growth in 2018 assumes a moderate turnaround in China.
- Latin America growth is modest helped by demand outside of Brazil; new product innovation and better cost/price. Trend-line 5% growth in 2018 reflects stabilization in Brazil.

## FAVORABLE U.S. OUTLOOK HELPED BY REPLACEMENT AND IMPROVING ECONOMY

#### LONG-TERM U.S. DEMAND TRENDS REMAIN POSITIVE



